

Applicant: Anatoliy V. Tsyrganovich  
Serial No.: 10/820,237  
Filing Date: April 5, 2004  
Docket No.: ZIL-519-1C

### REMARKS

Reconsideration and allowance are respectfully requested.

Before entry of this amendment, claims 55-74 were pending. In the Office Action, claims 55 and 60-74 were rejected and claims 56-59 were objected-to. In the present amendment, claim 56 is amended.

#### I. Interview Summary Pursuant to 37 CFR § 1.133

On March 22, 2007, in an interview by telephone, the Examiner stated that claims 56-59 are allowable but objected-to for being based on rejected base claim 55. Applicant notes that the Supplemental Office Action summary indicates that claims 56-59 are objected-to (in agreement with Applicant's record) but that the written interview summary indicates that merely claims 56-58 are objected-to (Office Action, page 2, line 3). Applicant requests that the Examiner indicate whether claim 59 is objected-to or rejected (and on what grounds).

#### II. Claims 55 and 61

Claims 55 and 61 are rejected under 35 U.S.C. § 102(b) as being anticipated by Jackson et al. (U.S. Patent No. 5,475,286) (hereafter "Jackson"). (Office Action, page 2, lines 16-17).

Claim 55 recites "generating a correction signal with no discontinuities, wherein the correction signal has a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$  . . . generate a deflection current signal, wherein the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " (emphasis added).

Jackson does not form the basis for a valid rejection under § 102(b) because Jackson does not disclose all of the limitations of claim 55. Specifically, Jackson discloses neither (i) a correction signal with no discontinuities, nor (ii) a deflection current signal that is not distorted when the correction signal transitions from the vertical retrace time to the vertical active time. The Examiner states that figure 3, part F, of Jackson discloses a correction signal that has no

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discontinuities. (Office Action, page 2, lines 20-21). Applicant respectfully disagrees that the signal depicted in figure 3, part F, is a correction signal and that the signal has no discontinuities. Jackson discloses using a periodic asymmetrical parabola (waveform B of figure 5) rather than using the waveform of figure 3, part F, generally to correct the distortion in the raster shown in part C of figure 2. Jackson discloses that using an asymmetrical parabola could generally correct an over-corrected raster shown in figure 2, part C:

“vertical rate parabolic correction produces a corrected, generally rectangular raster R. The distorted raster D is symmetrically distorted about the vertical center of the raster. A symmetrical correction modulation signal, for example a vertical rate parabola P, will provide symmetrical deflection width correction to produce the rectangular raster R” (emphasis added) (Jackson, col. 7, lines 15-21).

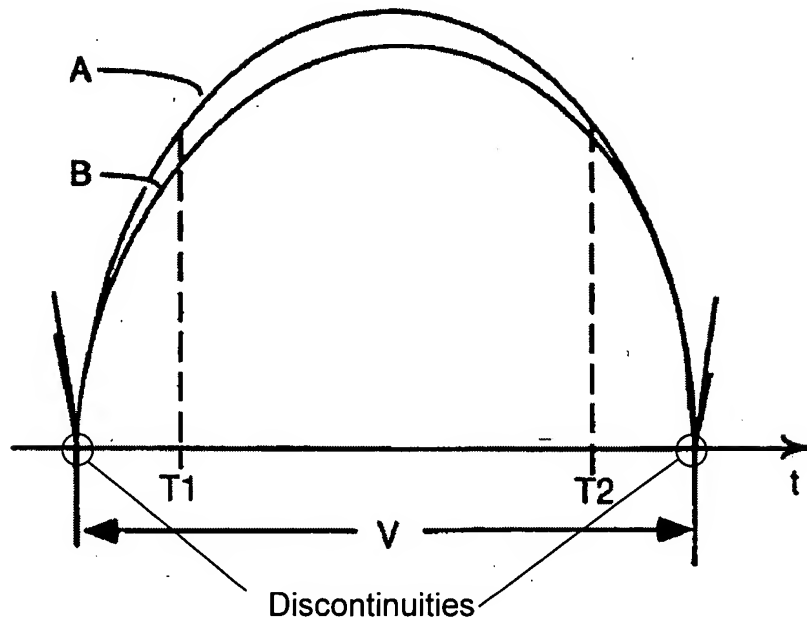
“Deflection amplitude correction with the symmetrical parabola P of FIG. 2A will result in over correction  $\Delta L$  at the top of the raster as shown in FIG. 2C. Thus an asymmetrical correction signal is required, which must provide differing amounts of correction in the first and second portions of the correction signal” (emphasis added) (Jackson, col. 7, lines 26-31).

“Waveform B of FIG. 5 depicts the East-West vertical rate parabolic waveform at the terminal point B subject to asymmetrical shaping due to circuit 300” (emphasis added) (Jackson, col. 8, lines 47-50).

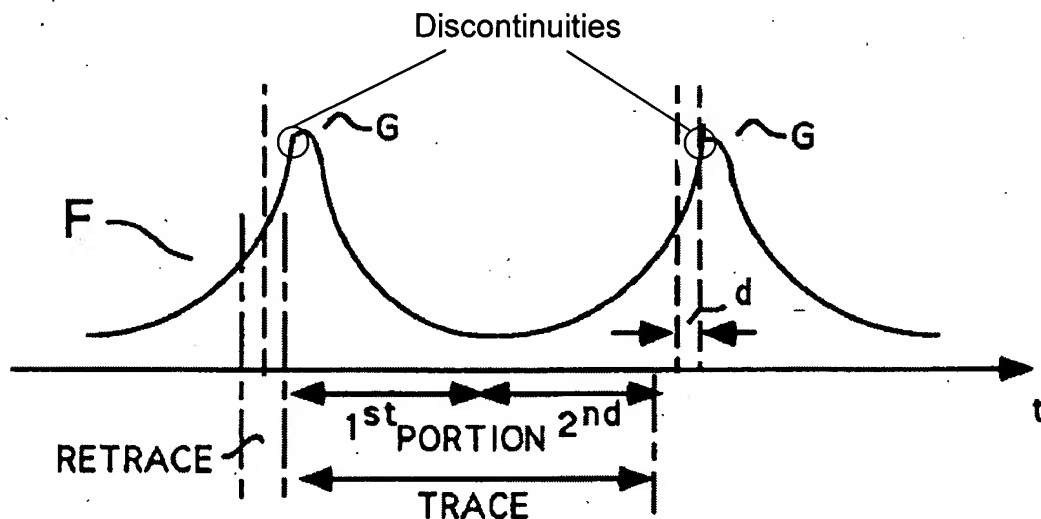
The waveform of figure 3, part F, alone is not used to correct the distorted raster D of figure 2, part A, because it would not correct the distortion that is symmetrically distorted about the vertical center of the raster. Rather, using the waveform of figure 3, part F, alone would appear to overcorrect rows close to the top and bottom of the raster (as indicated by peaks near the retrace periods) and under-correct rows towards the middle of the raster (as indicated by the low near the center of the trace period).

Figure 5 (reproduced below) of Jackson shows an asymmetrical parabolic waveform having discontinuities. Applicant has circled the discontinuities in the reproduced version of figure 5.

**FIGURE 5**



For the sake of discussion, even if the signal depicted in figure 3, part F, is considered a correction signal, the signal has discontinuities. Figure 3, part F, of Jackson is reproduced below, and Applicant has circled the discontinuities.



It is clear from Applicant's specification that the circled portions of the signals of Jackson are discontinuities. Figure 5 of Applicant's specification is reproduced below and shows an example of a discontinuity 514.

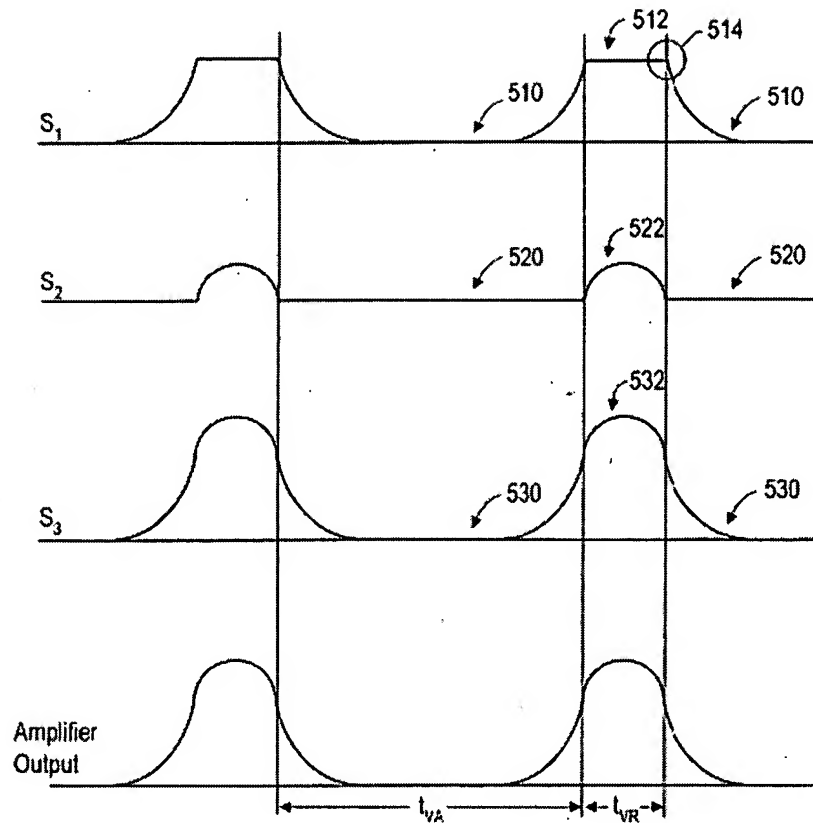


Fig. 5

The specification explains discontinuity 514 at paragraph [0038] as follows:

"[0038] As explained above, using first horizontal correction signal component  $S_1$  to modulate the amplitude of a horizontal sawtooth signal is undesirable since there is a discontinuity 514 between undefined portion 512 and parabolic portions 510. In particular, when first horizontal correction signal component  $S_1$  is amplified, discontinuity 514 causes the signal output from the amplifier to be distorted. As a result, horizontal deflection current signal  $I_H$  will be distorted resulting in an east-west geometry mismatch between the top and bottom of a raster display (as shown in FIG. 3C)." (emphasis added)

In addition, Applicant respectfully submits that Jackson does not disclose "the deflection current signal is not distorted when the correction signal

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transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ "  
(emphasis added) of claim 55.

The Examiner states that Jackson discloses "the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " by citing column 1, lines 66-67 and column 2, lines 1-2 of Jackson (Office Action, page 3, lines 3-4). The Examiner appears to find that Jackson discloses "the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " by implication because "any existing distortion in the raster (deflection current) is corrected, the current also can not be distorted in the points where the signal transitions" (Office Action, page 3, lines 1-5). The Examiner finds that the absence of any distortion in the raster implies that the correction signal used to generate the raster has no distortion when the correction signal transitions from the vertical retrace time to the vertical active time. Applicant respectfully submits that Jackson's disclosure of a generally corrected raster is not equivalent to a disclosure that the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time to the vertical active time.

Jackson does not disclose that the raster is perfectly rectangular but rather discloses that "asymmetrical pincushion distortion is generally corrected" (emphasis added) (col. 2, lines 1-2) and "vertical rate parabolic correction produces a corrected, generally rectangular raster R" (emphasis added) (col. 7, lines 15-16). Accordingly, distortion in the raster is likely present and the distortion in the raster could be due to distortion in the correction signal. As shown in the figure 5 of Jackson, discontinuities are present in the correction signal when the correction signal transitions from the vertical retrace time to the vertical active time and those discontinuities could cause of distortions of a resulting deflection current signal. Jackson does not even mention whether the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time to the vertical active time.

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Because Jackson does not disclose all of the elements of claim 55, Jackson does not form the basis for a valid § 102(b) rejection. Claim 61 depends from claim 55 and is allowable for at least the same reasons as pertain to claim 55. Allowance of claims 55 and 61 is requested.

III. Claims 60, 62-67, 69-72 and 74

Claims 60, 62-67, 69-72 and 74 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jackson in view of George (U.S. Patent No. 5,648,703) (hereafter "George") (Office Action, page 3, lines 18-20).

As is well known, to establish a *prima facie* case of obviousness, the Examiner must demonstrate three criteria. The MPEP § 2142 states:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claimed limitations." MPEP § 2142 (emphasis added).

A. Claims 60, 62 and 72

Claim 60 incorporates the following limitation of claim 55, "generating a correction signal with no discontinuities, wherein the correction signal has a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$  . . . generate a deflection current signal, wherein the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ ". Claim 62 recites, "generate a horizontal deflection current signal, wherein the horizontal correction signal has no discontinuities, wherein the horizontal correction signal has a vertical active time  $t_{VA}$  and a vertical retrace time  $t_{VR}$ , and wherein the horizontal deflection current signal is not distorted after a transition from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " (emphasis added). Claim 72 recites, "generate a horizontal deflection current

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signal, wherein the horizontal correction signal does not have any discontinuities" (emphasis added).

The combination of the teachings of Jackson with the teachings of George does not teach all limitations of base claims 55, 62 or 72. As shown earlier, Jackson teaches neither (i) generating a correction signal with no discontinuities, nor (ii) that a deflection current signal is not distorted when the correction signal transitions from the vertical retrace time to the vertical active time. George also does not teach either (i) generating a correction signal with no discontinuities, or (ii) that a deflection current signal is not distorted when or after the correction signal transitions from the vertical retrace time to the vertical active time. Rather, George teaches a correction signal having discontinuities. Figures 3A, 3B and 4A (reproduced below) of George shows a parabolic correction waveform P having discontinuities. Applicant has circled the discontinuities in the reproduced versions of figures 3A, 3B and 4A.

FIG. 3A

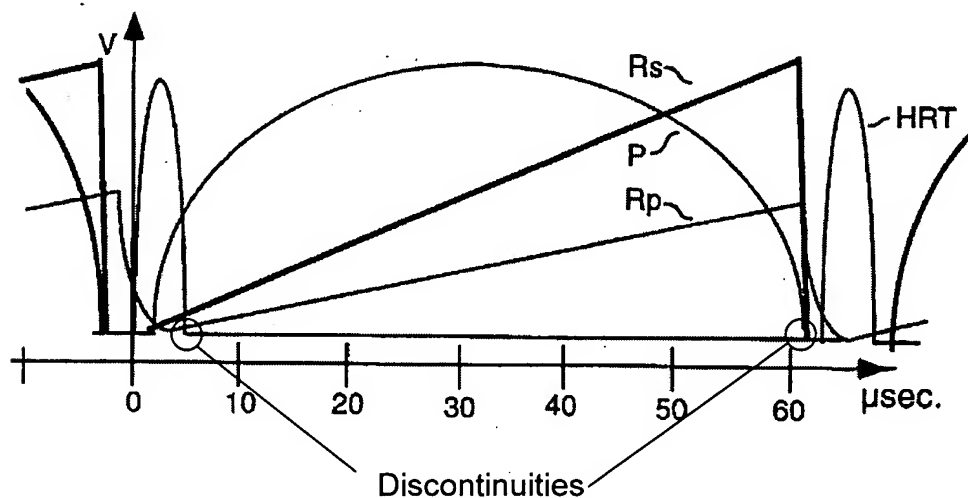


FIG. 3B

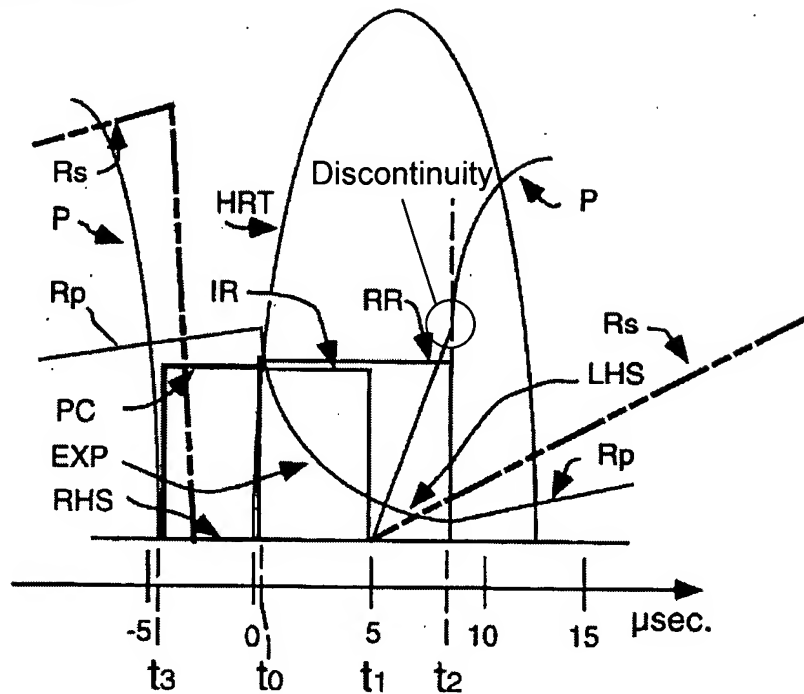
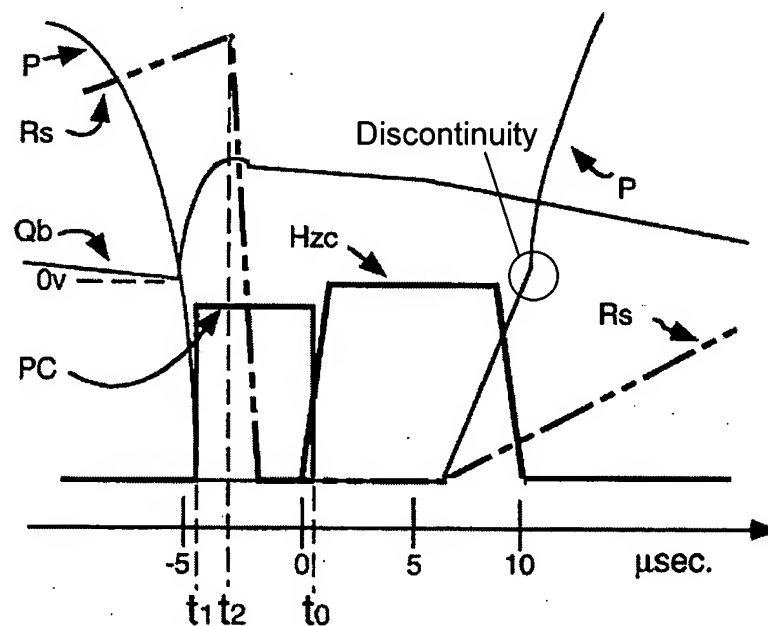


FIG. 4A



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George does not even mention that a deflection current is or is not distorted.

There would be no motivation to modify the teachings of either Jackson or George to arrive at all limitations of claims 55, 62 and 72. There must be actual evidence of a suggestion to modify a prior art reference, and the suggestion to modify the prior art must be clear and particular. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Prior art must be considered in its entirety, including disclosures that teach away from the claims. MPEP 2141.02 (citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)). Applicant respectfully submits that the Examiner has not provided a motivation to modify the teachings of Jackson or George to arrive at either generating a correction signal with no discontinuities or a deflection current signal that is not distorted when or after the correction signal transitions from the vertical retrace time to the vertical active time. Rather, each of Jackson and George teaches away from generating a correction signal with no discontinuities because each of Jackson and George teaches correction signals having discontinuities. Neither Jackson nor George even mention whether a deflection current signal is or is not distorted when or after the correction signal transitions from the vertical retrace time to the vertical active time.

Accordingly, at least because (i) the combination of the teachings of Jackson with the teachings of George does not teach all limitations of claims 60, 62 and 72 and (ii) there is no motivation to modify Jackson or George to arrive at all limitations of claims 60, 62 and 72, Jackson and George do not form the basis for a valid § 103(a) rejection.

Claims 63-67, 69-71 and 74 depend directly or indirectly from one of base claims 55, 62 and 72 and are allowable for at least the same reasons as pertain to one of base claim 55, 62 and 72.

Reconsideration of the §103(a) rejection and allowance of claims 60, 62-67, 69-72 and 74 is requested.

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IV. Claims 68 and 73

Claims 68 and 73 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jackson in view of George and further in view of Pspice (<http://www.orcad.com/pspicead.aspx>) ("Pspice") (Office Action, page 6, lines 16-18).

Claim 68 incorporates the following limitation of base claim 62, "horizontal correction signal has no discontinuities . . . wherein the horizontal deflection current signal is not distorted after a transition from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ ". Claim 73 incorporates the following limitation of base claim 72, "horizontal correction signal does not have any discontinuities".

The combination of the teachings of Jackson with the teachings of George and Pspice does not teach all elements of the base claims 62 and 72. As shown earlier, neither Jackson nor George teaches all elements of base claims 62 and 72, and there is no motivation to modify the teachings of Jackson or George to arrive at all limitations of claims 62 or 72. Pspice teaches neither a correction signal having no discontinuities nor a deflection current signal that is not distorted after a transition from the vertical retrace time to the vertical active time. Pspice does not provide a motivation to modify Jackson or George to arrive at all limitations of base claims 62 and 72.

The combination of Jackson, George and Pspice does not form the basis for a valid rejection of claims 68 and 73 under § 103(a) at least because (i) the references when combined do not teach all limitations of claims 68 and 73 and (ii) there is no motivation to modify the teachings of Jackson, George or Pspice to arrive at all limitations of claims 68 and 73.

Reconsideration of the §103(a) rejection and allowance of claims 68 and 73 is requested.

V. Objection to Claims 56-59

Claims 56-59 are objected to for being dependent on a rejected base claim but would be allowable if rewritten in independent form including all

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limitations of the base claim and any intervening claim. Claim 56 has been amended to include all limitations of base claim 55. Allowance of claims 56-59 is requested.

VI. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully submits that the entire application is in condition for allowance. A Notice of Allowance is respectfully requested. The Examiner may contact Glen B. Choi at (703) 636-5448 to discuss any aspect of this application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By   
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Date of Deposit: May 15, 2007

Respectfully submitted,



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